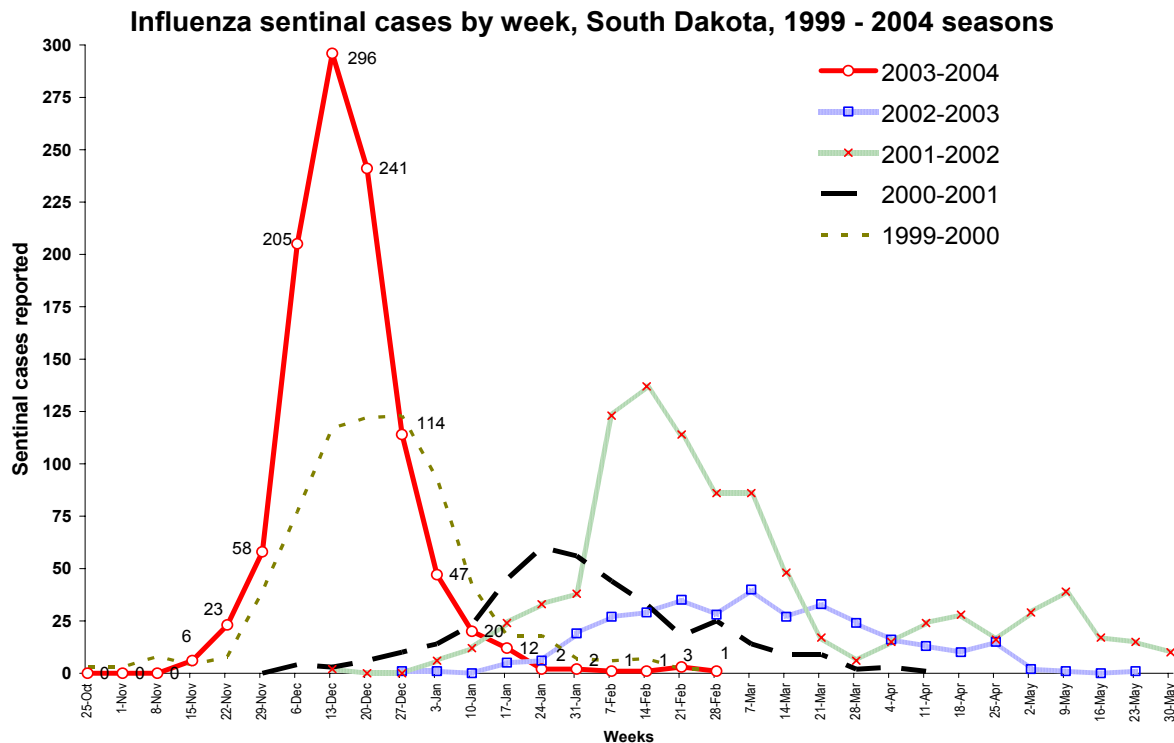


Influenza surveillance: the 2003 - 2004 season in South Dakota

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The CDC's Division of Viral and Rickettsial Diseases, collaborating with the World Health Organization, collects and analyzes influenza viral isolates and data from state health departments and other surveillance sites. The information presents a state, national and global description of the seasonal outbreak. South Dakota participates in this international surveillance network through the Department of Health.

South Dakota's first influenza cases of the 2003-2004 season were reported during the week ending 15 November 2003. During that week two culture confirmed cases of influenza A (later typed as A/H3N2) were detected in Minnehaha and Pennington Counties. Influenza activity increased swiftly over the next four weeks peaking in mid-December (see figure below). Thereafter, activity decreased sharply with the last report on 23 February 2004.



The 2003-2004 influenza season in South Dakota was early, intense, and short in duration. The season's victims were young (see table). Two-thirds of the sentinel cases were children 19 years and younger. Between 1 October 2003 and 31 March 2004, 141 individuals died of pneumonia or influenza. Of these deaths, 25 died of influenza, including 1 child under the age of 18.

Of 1032 sentinel influenza cases reported in to the SD Department of Health 1030 (99.8%) were type A and 2 (0.2%) were type B. Of the influenza A reported, 138 were subtyped, all being A(H3N2). Other viral respiratory reports during the influenza season included RSV (respiratory syncytial virus) 865, adenovirus 71, and parainfluenza-1, -2 and -4, 293.

Nationally, influenza viruses were first isolated in Texas in October 2003. The percentage of positive influenza tests and the proportion influenza-like illness in outpatient visits to sentinel physicians increased substantially in November and peaked in mid-December.

Nationally, influenza A(H3N2) viruses were most commonly isolated, with small numbers of influenza B and influenza A (H1) viruses identified. 130,577 respiratory specimens were tested for influenza viruses; 24,649 (19%) were positive, 99% were influenza A viruses and 1% were influenza B viruses. Among the influenza A viral isolates subtyped 99.9% were influenza A(H3N2), and 0.1% were influenza A(H1) viruses. Of the influenza A(H3N2) isolates characterized 89% were antigenically similar to the drift variant, A/Fujian/411/2002(H3N2), and 11% were similar to the vaccine strain A/Panama/2007/99(H3N2).

A report of the 2003-2004 influenza season and the composition of the 2004-2005 influenza vaccine is found in the 2 July 2004 MMWR 53/25, page 547-552, and the ACIP *Recommendations on Prevention and Control of Influenza* are found in the 28 May 2004 MMWR 53/RR6. Link: www.cdc.gov/mmwr/index.html.

Viral respiratory reports from the South Dakota Public Health Laboratory (SDPHL)** and the USD Clinical Virology Laboratory (USD-CLV)**, 1 Nov 2003 – 29 May 2004.

	SDPHL ♦	USD-CVL°	TOTAL
Influenza A	200*	905	1105
Influenza B	0	2	2
Adenovirus	0	71	71
RSV	2	863	865
Parainfluenza-1	2	115	117
Parainfluenza-2	0	0	0
Parainfluenza-3	1	136	137
Parainfluenza-4	0	39	39

*138 isolates of Influenza A/H3N2, 62 untyped Influenza A

**Represents all specimens tested and may include out-of-state cases

♦ In cooperation with Influenza Surveillance Sentinel Sites

Surveillance for influenza is active year-round, but intensifies between October and May. South Dakota's laboratory surveillance for influenza viruses involves a statewide sentinel network including clinics, hospital laboratories, college health services, and community health centers that collect throat swabs from patients with influenza-like illness. The State Public Health Laboratory provides the culture/transport media and reports the culture results of the viral subtype isolated. The USD Clinical Virology Laboratories in Sioux Falls and Rapid City provides influenza diagnostic services in South Dakota and collaborates in SD influenza surveillance. Five SD health care providers participate in the CDC's Sentinel Physician program. These Sentinel Physicians practice in Sioux Falls, Pierre, Isabel and Rapid City. Thirty-one sites throughout the state voluntarily reported their influenza testing and cases.

Age distribution of sentinel influenza cases, South Dakota, 2003-2004 season

Age group	n	Percent
< 1 yr	127	12%
1 - 9 yr	320	31%
10 - 19 yr	229	22%
20 - 29 yr	98	10%
30 - 39 yr	44	4%
40 - 49 yr	25	2%
50 - 59 yr	38	4%
60 - 69 yr	49	5%
70 - 79 yr	50	5%
80 - 89 yr	33	3%
90+ yr	14	1%
TOTAL	1027	100%

In South Dakota all laboratory confirmed cases of influenza are mandatory reportable events. Clinics and laboratories in SD are also required to submit weekly reports of the number of rapid antigen influenza positive tests and the total number of influenza tests performed. During the influenza season weekly summary reports are posted on the SD Department of Health Web site at www.state.sd.us/doh/Flu/index.htm.